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Amendments to the Claims:

Claims 1-45 (Cancelled)

46. (Currently amended) An isolated polypeptide comprising an amino acid sequence as set forth in SEQ ID NO:5, wherein said polypeptide does not bind to choline ~~and has lectin activity.~~

47. (Previously added) The isolated polypeptide of claim 46, wherein said polypeptide comprises SEQ ID NO:3.

48. (Previously added) The isolated polypeptide of claim 46, wherein said polypeptide comprises SEQ ID NO:1.

49. (Previously added) The isolated polypeptide of claim 46, wherein said polypeptide comprises SEQ ID NO:24.

50. (Previously added) The isolated polypeptide of claim 46, wherein said polypeptide is immunogenic.

51. (Previously added) The isolated polypeptide of claim 46, wherein said polypeptide comprises an amino acid sequence having up to 475 amino acids.

52. (Previously added) The isolated polypeptide of claim 51, wherein said polypeptide comprises an amino acid sequence having up to 460 amino acids.

53. (Currently amended) A ~~pharmaceutical~~ composition comprising the polypeptide of claim 46 and a pharmaceutically acceptable adjuvant, carrier, or diluent.

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54. (Currently amended) An isolated polypeptide comprising an amino acid sequence as set forth in SEQ ID NO:4, wherein said polypeptide does not bind to choline ~~and has lectin~~ activity.

55. (Previously added) The isolated polypeptide of claim 54, wherein said polypeptide comprises SEQ ID NO:22.

56. (Previously added) The isolated polypeptide of claim 54, wherein said polypeptide is immunogenic.

57. (Previously added) The isolated polypeptide of claim 54, wherein said polypeptide comprises an amino acid sequence having up to 475 amino acids.

58. (Previously added) The isolated polypeptide of claim 54, wherein said polypeptide comprises an amino acid sequence having up to 460 amino acids.

59. (Currently amended) An isolated polypeptide comprising a fragment of ~~an~~ the amino acid sequence of SEQ ID NO:24, wherein said fragment does not bind to choline, ~~has lectin activity~~ and comprises at least 138 consecutive amino acids of SEQ ID NO:24, wherein said polypeptide is immunogenic.

60. (Currently amended) An isolated polypeptide comprising ~~an~~ the amino acid sequence as set forth in SEQ ID NO:5, wherein said amino acid sequence comprises at least one to 57 amino acid substitutions, wherein said polypeptide does not bind choline, ~~and has lectin activity~~ is immunogenic and said polypeptide comprises up to 398 amino acids.

61. (Currently amended) An isolated polypeptide comprising the amino acid sequence set forth in SEQ ID NO:3, wherein said amino acid sequence comprises at least one to

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57 amino acid substitutions, and said polypeptide does not bind choline and ~~has lectin activity~~  
wherein said polypeptide is immunogenic.

62. (Currently amended) The isolated polypeptide of claim 61, wherein said polypeptide comprises the amino acid sequence set forth in SEQ ID NO:1, wherein said amino acid sequence comprises at least one to 57 amino acid substitutions, and said polypeptide does not bind choline and ~~has lectin activity~~ wherein said polypeptide is immunogenic.

63. (Currently amended) The isolated polypeptide of claim 61, wherein said polypeptide comprises the amino acid sequence set forth in SEQ ID NO:24, wherein said amino acid sequence comprises at least one to 57 amino acid substitutions, and said polypeptide does not bind choline and ~~has lectin activity~~ wherein said polypeptide is immunogenic.

64. (Cancelled)

65. (Cancelled)

66. (Previously added) The isolated polypeptide of claim 60, wherein said amino acid substitutions comprise conservative amino acid substitutions.

67. (Currently amended) An isolated polypeptide comprising an ~~the~~ amino acid sequence set forth in SEQ ID NO:4, wherein said amino acid sequence comprises at least one to 57 amino acid substitutions, wherein said polypeptide does not bind choline and ~~has lectin activity~~ wherein said polypeptide is immunogenic and said polypeptide comprises up to 398 amino acids.

68. (Currently amended) The isolated polypeptide of claim 67, wherein said polypeptide comprises the amino acid sequence set forth in SEQ ID NO:22, wherein said amino

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acid sequence comprises at least one to 57 amino acid substitutions, and said polypeptide does not bind choline and ~~has lectin activity wherein said polypeptide is immunogenic.~~

69. (Currently amended) An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:

- a) an analog of the amino acid sequence set forth in SEQ ID NO:5, wherein said polypeptide does not bind choline and ~~has lectin activity~~ is immunogenic;
- b) an analog of the amino acid sequence set forth in SEQ ID NO:4, wherein said polypeptide does not bind choline and ~~has lectin activity~~ is immunogenic;
- c) an analog of the amino acid sequence set forth in SEQ ID NO:11, wherein said polypeptide does not bind choline, ~~and has lectin activity~~ is immunogenic, and comprise up to 328 amino acids;
- d) an analog of the amino acid sequence set forth in SEQ ID NO:9, wherein said polypeptide does not bind choline, ~~and has lectin activity~~ is immunogenic, and comprises up to 376 amino acids; and,
- e) an analog of the amino acid sequence set forth in SEQ ID NO:10, wherein said polypeptide does not bind choline, ~~and has lectin activity~~ is immunogenic and comprises up to 328 amino acids.

70. (Currently amended) An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:

- a) a derivative of the amino acid sequence set forth in SEQ ID NO:5, wherein said polypeptide does not bind choline and ~~has lectin activity~~ is immunogenic;
- b) a derivative of the amino acid sequence set forth in SEQ ID NO:4, wherein said polypeptide does not bind choline and ~~has lectin activity~~ is immunogenic;
- c) a derivative of the amino acid sequence set forth in SEQ ID NO:11, wherein said polypeptide does not bind choline, ~~and has lectin activity~~ is immunogenic, and comprise up to 328 amino acids;

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d) a derivative of the amino acid sequence set forth in SEQ ID NO:9, wherein said polypeptide does not bind choline, ~~and has lectin activity~~ is immunogenic, and comprises up to 376 amino acids; and,

e) a derivative of the amino acid sequence set forth in SEQ ID NO:10, wherein said polypeptide does not bind choline, ~~and has lectin activity~~ is immunogenic and comprises up to 328 amino acids.

71. (Currently amended) An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:

a) the amino acid sequence set forth in SEQ ID NO:5 wherein said amino acid sequence comprises at least one to 57 amino acid substitutions and said polypeptide comprises up to 398 amino acids, ~~retains native tertiary structure~~, does not bind choline and ~~has lectin activity~~ is immunogenic, wherein said polypeptide interacts with an antibody, said antibody is capable of interacting with a full-length CbpA polypeptide;

b) the amino acid sequence set forth in SEQ ID NO:4 wherein said amino acid sequence comprises at least one to 57 amino acid substitutions and said polypeptide comprises up to 398 amino acids, ~~retains native tertiary structure~~, does not bind choline and ~~has lectin activity~~ is immunogenic, wherein said polypeptide interacts with an antibody, said antibody is capable of interacting with a full-length CbpA polypeptide;

c) the amino acid sequence set forth in SEQ ID NO:11 wherein said amino acid sequence comprises at least one to 57 amino acid substitutions and said polypeptide ~~retains native tertiary structure~~, does not bind choline and ~~has lectin activity~~ is immunogenic, and comprise up to 328 amino acids, wherein said polypeptide interacts with an antibody, said antibody is capable of interacting with a full-length CbpA polypeptide;

d) the amino acid sequence set forth in SEQ ID NO:9 wherein said amino acid sequence comprises at least one to 57 amino acid substitutions and said polypeptide ~~retains native tertiary structure~~, does not bind choline and ~~has lectin activity~~ is immunogenic, and comprises up to 376 amino acids, wherein said polypeptide interacts with an antibody, said antibody is capable of interacting with a full-length CbpA polypeptide;

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e) the amino acid sequence set forth in SEQ ID NO:10 wherein said amino acid sequence comprises at least one to 57 amino acid substitutions and said polypeptide ~~retains native tertiary structure~~, does not bind choline, ~~and has lectin activity~~ is immunogenic and comprises up to 328 amino acids, wherein said polypeptide interacts with an antibody, said antibody is capable of interacting with a full-length CbpA polypeptide; and,

f) the amino acid sequence set forth in SEQ ID NO:3 wherein said amino acid sequence comprises at least one to 57 amino acid substitutions and said polypeptide ~~retains native tertiary structure~~, does not bind choline and ~~has lectin activity~~ is immunogenic, wherein said polypeptide interacts with an antibody, said antibody is capable of interacting with a full-length CbpA polypeptide.

72. (Currently amended) An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:

a) the amino acid sequence set forth in SEQ ID NO:5, wherein said polypeptide ~~retains native tertiary structure~~, does not bind choline, wherein said polypeptide interacts with an antibody, said antibody is capable of interacting with a full-length CbpA polypeptide ~~and has lectin activity~~;

b) the amino acid sequence set forth in SEQ ID NO:4, wherein said polypeptide ~~retains native tertiary structure~~, does not bind choline, wherein said polypeptide interacts with an antibody, said antibody is capable of interacting with a full-length CbpA polypeptide ~~and has lectin activity~~;

c) the amino acid sequence set forth in SEQ ID NO:11, wherein said polypeptide ~~retains native tertiary structure~~, does not bind choline ~~and has lectin activity~~, is immunogenic and comprise up to 328 amino acids, wherein said polypeptide interacts with an antibody, said antibody is capable of interacting with a full-length CbpA polypeptide;

d) the amino acid sequence set forth in SEQ ID NO:9, wherein said polypeptide ~~retains native tertiary structure~~, does not bind choline ~~and has lectin activity~~, is immunogenic and comprises up to 376 amino acids, wherein said polypeptide interacts with an antibody, said antibody is capable of interacting with the full-length CbpA polypeptide; and,

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e) the amino acid sequence set forth in SEQ ID NO:10, wherein said polypeptide ~~retains native tertiary structure~~, does not bind choline ~~and has lectin activity~~, is immunogenic and comprises up to 328 amino acids, wherein said polypeptide interacts with an antibody, said antibody is capable of interacting with a full-length CbpA polypeptide.

73. (Cancelled)

74. (Currently amended) An isolated polypeptide comprising an amino acid sequence as set forth in SEQ ID NO:11, wherein said polypeptide does not bind to choline ~~and has lectin activity~~, and comprises up to 328 amino acids.

75. (Currently amended) An isolated polypeptide comprising an amino acid sequence as set forth in SEQ ID NO:9, wherein said polypeptide does not bind to choline ~~and has lectin activity~~, and comprises up to 376 amino acids.

76. (Previously amended) The isolated polypeptide of claim 75, wherein said polypeptide comprises SEQ ID NO:7.

77. (Previously added) The isolated polypeptide of claim 74, wherein said polypeptide is immunogenic.

78. (Previously amended) The isolated polypeptide of claim 75, wherein said polypeptide is immunogenic.

79. (Cancelled)

80. (Currently amended) A ~~pharmaceutical~~-composition comprising the polypeptide of claim 74 and a pharmaceutically acceptable adjuvant, carrier, or diluent.

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81. (Currently amended) An isolated polypeptide comprising an amino acid sequence as set forth in SEQ ID NO:10, wherein said polypeptide does not bind to choline; and ~~has-lectin activity~~ said polypeptide comprises up to 328 amino acids.

82. (Previously added) The isolated polypeptide of claim 81, wherein said polypeptide comprises SEQ ID NO:23.

83. (Previously added) The isolated polypeptide of claim 81, wherein said polypeptide is immunogenic.

Claims 84-86 (Cancelled)

87. (Currently amended) An isolated polypeptide comprising an amino acid sequence set forth in SEQ ID NO:11, wherein said amino acid sequence comprises at least one to 57 amino acid substitutions, and said polypeptide does not bind choline ~~and has-lectin activity~~, is immunogenic and comprises up to 328 amino acids.

88. (Currently amended) The isolated polypeptide of claim 87, wherein said polypeptide comprises the amino acid sequence set forth in SEQ ID NO:9, wherein said amino acid sequence comprises at least one to 57 amino acid substitutions, and said polypeptide does not bind choline ~~and has-lectin activity~~ is immunogenic.

89. (Currently amended) The isolated polypeptide of claim 87, wherein said polypeptide comprises the amino acid sequence set forth in SEQ ID NO:7, wherein said amino acid sequence comprises at least one to 57 amino acid substitutions, and said polypeptide does not bind choline ~~and has-lectin activity~~ is immunogenic.

90. (Cancelled)

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91. (Cancelled)

92. (Previously added) The isolated polypeptide of claim 87, wherein said amino acid substitutions comprise conservative amino acid substitutions.

93. (Currently amended) An isolated polypeptide comprising an amino acid sequence set forth in SEQ ID NO:10, wherein said amino acid sequence comprises at least one to 57 amino acid substitutions, and said polypeptide does not bind choline, ~~and has lectin activity~~ is immunogenic and comprises up to 328 amino acids.

94. (Currently amended) The isolated polypeptide of claim 93, wherein said polypeptide comprises the amino acid sequence set forth in SEQ ID NO:23, wherein said amino acid sequence comprises at least one to 57 amino acid substitutions, and said polypeptide does not bind choline ~~and has lectin activity~~ is immunogenic.

95. (Currently Amended) A ~~pharmaceutical~~ composition comprising the polypeptide of claim 75 and a pharmaceutically acceptable adjuvant, carrier, or diluent.

96. (Cancelled)

97. (Cancelled)

98. (Previously added) The isolated polypeptide of claim 61, wherein said amino acid substitutions comprise conservative amino acid substitutions.

99. (new) The isolated polypeptide of claim 59, wherein said polypeptide has lectin activity.

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100. (new) The isolated polypeptide of claim 60, wherein said polypeptide has lectin activity.

101. (new) The isolated polypeptide of claim 61, wherein said polypeptide has lectin activity.

102. (new) The isolated polypeptide of claim 62, wherein said polypeptide has lectin activity.

103. (new) The isolated polypeptide of claim 63, wherein said polypeptide has lectin activity.

104. (new) The isolated polypeptide of claim 67, wherein said polypeptide has lectin activity.

105. (new) The isolated polypeptide of claim 68, wherein said polypeptide has lectin activity.

106. (new) The isolated polypeptide of claim 87, wherein said polypeptide has lectin activity.

107. (new) The isolated polypeptide of claim 88, wherein said polypeptide has lectin activity.

108. (new) The isolated polypeptide of claim 89, wherein said polypeptide has lectin activity.

109. (new) The isolated polypeptide of claim 93, wherein said polypeptide has lectin activity.

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110. (new) The isolated polypeptide of claim 94, wherein said polypeptide has lectin activity.